ABSTRACT OF DISCLOSURE

Provided with a method of fabricating a semiconductor device including the steps of: selectively forming an insulating oxide layer in a semiconductor substrate having a first conductivity type, wherein the semiconductor substrate has first and second regions; forming impurity layers having a second conductivity type in the first and second regions of the semiconductor substrate; forming a first mask layer in the second region of the semiconductor substrate; forming impurity layers having the second conductivity type in the first region of the semiconductor substrate by performing serial ion implantations with different doses of dopants at different acceleration energies; forming a second mask layer in the first region of the semiconductor substrate; and forming impurity layers having the first conductivity type in the second region of the semiconductor substrate by performing serial ion implantations with different doses of dopants at different acceleration energies.